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Chapter 33

THE ADMISSIBILITY OF EXPERT TESTIMONY

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The Federal Rules of Evidence and controlling Supreme Court precedents make expert economic testimony in antitrust cases inadmissible unless (1) the witness is expert in relevant aspects of economics, (2) the testimony is well grounded in those aspects of economics, and (3) the testimony applies the tools of economics to the facts of the case. This chapter explains how these principles have been, and should be, applied. This chapter argues that strict application of these principles improves the quality of economic testimony in antitrust cases, increases the sophistication of the discourse in antitrust litigation, and enhances the accuracy of judge and jury decisions.

1. Introduction

Rule 702 of the Federal Rules of Evidence (FRE 702) was revised, effective December 1, 2000, to incorporate significant developments in the case law beginning with the Supreme Court's 1993 *Daubert* decision.¹ FRE 702 now provides:

If scientific, technical, or other specialized knowledge will assist the trier of fact to understand the evidence or to determine a fact in issue, a witness qualified as an expert by knowledge, skill, experience, training, or education, may testify thereto in the form of an opinion or otherwise, if (1) the testimony is based upon sufficient facts or data, (2) the testimony is the product of reliable principles and methods, and (3) the witness has applied the principles and methods reliably to the facts of the case.

Daubert principally held that the “general acceptance” standard of *Frye*² had been superseded by the adoption of the Federal Rules of Evidence.³ The decision went on to explain that the Rules require a trial judge to serve in a “gatekeeping role” and to make a “preliminary assessment of whether the reasoning or methodology underlying expert testimony is scientifically valid and of whether that reasoning or methodology properly can be applied to the facts in issue.”⁴ This “inquiry . . . is . . . a flexible one” focused “solely on principles and methodology, not on the conclusions that they generate.”⁵ Moreover, the Court noted that expert testimony is admissible only if it “is sufficiently tied to the facts of the case and will aid the jury in resolving a factual dispute,” i.e., it is

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1. *Daubert v. Merrell Dow Pharms.*, 509 U.S. 579 (1993). See generally Margaret A. Berger, *The Supreme Court's Trilogy on the Admissibility of Expert Testimony*, in REFERENCE MANUAL ON SCIENTIFIC EVIDENCE 9 (Federal Judicial Center 2d ed. 2000).
2. *Frye v. United States*, 293 F. 1013 (D.C. Cir. 1923).
3. *Daubert*, 509 U.S. at 585-89.
4. *Id.* at 592-93, 597.
5. *Id.* at 594-95.

admissible only if there is a good “fit” between the testimony and the pertinent inquiry.⁶ Although judges do not serve in the same gatekeeping role in bench trials as in jury trials, FRE 702 applies equally to both.

In *Daubert*, the Court specified that the “subject of an expert’s testimony must be ‘scientific . . . knowledge’ and ‘in order to qualify as ‘scientific knowledge,’ an inference or assertion must be derived by the scientific method.’”⁷ One may doubt that economists ever testify on the basis of scientific knowledge, and several antitrust decisions suggested the *Daubert* standard did not apply to economic testimony.⁸ In *Kumho Tire*, however, the Court held that “the trial judge’s general ‘gatekeeping’ obligation . . . applies not only to testimony based on ‘scientific’ knowledge,” but also to testimony based on ‘technical’ and ‘other specialized’ knowledge.”⁹ Economics falls within one of these categories. Accordingly, the Court’s explanation of “*Daubert*’s gatekeeping requirement” is relevant to economic testimony in antitrust cases:

The objective of that requirement is to ensure the reliability and relevancy of expert testimony. It is to make certain that an expert, whether basing testimony upon professional studies or personal experience, employs in the courtroom the same level of intellectual rigor that characterizes the practice of an expert in the relevant field.¹⁰

Daubert, *Kumho Tire*, and FRE 702 establish that expert economic testimony in antitrust cases is inadmissible unless (1) the witness is an expert in relevant aspects of economics, (2) the testimony is well-grounded in those aspects of economics, and (3) the testimony applies the tools of economics to the facts of the case.¹¹

2. Witness qualifications

Whether a witness is qualified to provide expert testimony sometimes is obvious: a witness with little or no formal training in economics almost certainly is not qualified to offer testimony with a purported basis in economics,¹² and a Ph.D. economist with

6. *Id.* at 591 (quoting *United States v. Downing*, 753 F.2d 1224, 1242 (3d Cir. 1985)).

7. *Id.* at 589-90 (ellipsis in original).

8. *Brooks Fiber Commc’ns of Tucson v. GST Tucson Lightwave, Inc.*, 992 F. Supp. 1124, 1132 (D. Ariz. 1997); *Bell Atl. Bus. Sys. Servs. v. Hitachi Data Sys. Corp.*, 1995-2 Trade Cas. (CCH) ¶ 71,259, at 76,130-31 (N.D. Cal. 1995).

9. *Kumho Tire Co. v. Carmichael*, 526 U.S. 137, 141 (1999); *see also id.* at 147-49.

10. *Id.* at 152.

11. This chapter considers only the admissibility of economic testimony in the federal courts, although about half of the states apply either *Daubert* or a similar test. *See* Joseph A. Keierleber & Thomas L. Bohan, *Ten Years after Daubert: The Status of the States*, 50 J. FORENSIC SCI. 1154 (2005); Alice B. Lustre, Annotation, *Post-Daubert Standards for Admissibility of Scientific and Other Expert Evidence in State Courts*, 90 A.L.R. 5th 453 (2006). For details of the various approaches followed by the states, *see id.*; David E. Bernstein & Jeffrey D. Jackson, *The Daubert Trilogy in the States*, 44 JURIMETRICS J. 351 (2004); and Clark Hedger, *Daubert and the States: A Critical Analysis of Emerging Trends*, 49 ST. LOUIS U. L.J. 177 (2004).

12. *See, e.g., Berlyn, Inc. v. Gazette Newspapers*, 214 F. Supp. 2d 530, 537 (D. Md. 2002) (excluding testimony on the relevant market by a witness lacking “specific education, training, or experience in economics or antitrust analysis”); *Va. Vermiculite Ltd. v. W.R. Grace & Co.—Conn.*, 98 F. Supp. 2d 729, 733 (W.D. Va. 2000) (excluding testimony on the relevant market by a witness lacking the “skill and training of a professional economist necessary to define a relevant market for antitrust purposes”).

extensive professional experience and scholarly publications almost certainly is qualified to offer testimony on issues closely related to his experience and publications.¹³ Nevertheless, often the qualification of a witness to testify on economic issues is not so obvious as might be supposed.

Neither the lack of a Ph.D. in economics nor the absence of relevant academic publications necessarily disqualifies a witness from testifying as an expert in economics. Judge Richard Posner properly observed that “[t]he notion that *Daubert* . . . requires particular credentials for an expert witness is radically unsound”¹⁴ and “[t]here is no ironclad requirement that an academic, to be qualified as an expert witness, must publish academic books or articles on the precise subject matter of her testimony.”¹⁵

In addition, no economist—not even one who has been awarded the Nobel Prize—is qualified to testify about every economic issue that arises in antitrust litigation or to apply every analytic method used by economists. To be qualified as an expert, an economist must have training and experience relevant to the particular issues addressed, and methods applied, in the case.¹⁶ As Posner also has noted: “The *Daubert* test must be applied with due regard for the specialization of modern science.”¹⁷ Economics is highly specialized, as are many of the particular applications of economics in antitrust cases, and antitrust cases generally call for specialized expertise that most Ph.D. economists lack.¹⁸

The nature of the “specialized knowledge” required by FRE 702 depends on the issues addressed and methods applied. For example, general training in economics at the Ph.D. level normally qualifies a witness as an expert on basic applications of econometric methods such as multiple regression. On more subtle and complex issues,

It is difficult to understand the district court’s decision in *Masimo Corp. v. Tyco Health Care Group, L.P.* to permit a law professor to testify regarding market definition over defense objections even though he lacked both formal training in economics and experience in the practice of economics. After the jury returned a verdict for the plaintiff, the court denied a motion for judgment as a matter of law, citing the professor’s testimony on the defendant’s dominant share, and inferentially his testimony on the relevant market. CV 02-4770 MRP, 2006 WL 1236666, (C.D. Cal. Mar. 22, 2006).

13. The exception is a witness so far outside the mainstream as to be considered a “crackpot” by his peers.
14. *Tuf Racing Prods. v. Am. Suzuki Motor Corp.*, 223 F.3d 585, 591 (7th Cir. 2000); *see also* *Carpet Group Int’l v. Oriental Rug Imps. Ass’n*, 2006-1 Trade Cas. (CCH) ¶ 75,189, at 104,479-80 (D.N.J. 2005) (qualifying an investment banker with a masters degree in economics to testify about the “economics of trade shows” on the basis of experience from having “analyzed many trade shows”), *aff’d*, 173 F. App’x 178 (3d Cir. 2006); *Waldorf v. Shuta*, 142 F.3d 601, 626 (3d Cir. 1998) (“[O]rdinarily an otherwise qualified witness is not disqualified merely because of a lack of academic training.”).
15. *Niam v. Ashcroft*, 354 F.3d 652, 660 (7th Cir. 2004).
16. *See Berry v. City of Detroit*, 25 F.3d 1342, 1351 (6th Cir. 1994) (a court should examine “not the qualifications of a witness in the abstract, but whether those qualifications provide a foundation for a witness to answer a specific question”).
17. *Dura Auto. Sys. of Ind. v. CTC Corp.*, 285 F.3d 609, 614 (7th Cir. 2002); *see also* *Schneider v. Fried*, 320 F.3d 396, 404 (3d Cir. 2003) (FRE 702 calls for “specialized expertise”).
18. *See, e.g., Nelson v. Monroe Reg’l Med. Ctr.*, 925 F.2d 1555, 1572 (7th Cir. 1991) (concurring opinion) (a respected Ph.D. economist with “no background in antitrust markets” and not “a member of any associations or industrial organization groups which form the bulwark of economists specializing in antitrust law and economics” was not qualified to testify on the relevant market).

however, only an economist specializing in econometrics may be qualified, and on some exotic techniques, only an econometrician with even more specialized knowledge of those particular techniques may be qualified.

Economists specializing in industrial organization are likely to be qualified to testify on many issues arising in antitrust cases, but specialization in industrial organization is neither necessary nor sufficient to qualify an economist to testify in an antitrust case. An economist with another specialty could have the training and experience necessary to address the particular issues presented by an antitrust case, and an industrial organization economist could lack the necessary training and experience. Some industrial organization economists focus on the theoretical aspects of the field while others focus on its empirical aspects, and either focus likely limits the range of issues over which an economist is qualified to testify. Moreover, the application of industrial organization economics to antitrust law is highly specialized. Antitrust law raises issues, particularly the delineation of the relevant market, not normally addressed in industrial organization economics. Thus, even a highly respected academic industrial organization economist might be unqualified to offer an opinion on basic issues in a typical antitrust case.

Experience with the issues addressed and methods applied in an antitrust case is always of value to a witness, but prior experience on the specific issues and methods may not be necessary to qualify an economist as an expert. For example, a well-trained econometrician is qualified to apply or assess methods never before encountered if they are modest extensions of familiar principles. Familiarity with relevant scholarly literature also is not essential to qualify an economist as an expert,¹⁹ although a lack of familiarity with relevant literature warrants a deep exploration of an economist's expertise. Finally, significant prior testimonial experience, by itself, has no bearing on whether an economist is qualified to testify.²⁰

The discussion to this point presumed the witness is offered as an expert on aspects of economics; however, industry participants (e.g., customers) may testify on many of the same issues as an economist. Rule 701 of the Federal Rules of Evidence (FRE 701) limits the testimony of a witness "not testifying as an expert" to "opinions or inferences . . . rationally based on the perception of the witness."²¹ While exceptions are possible,

19. *Cf. Dickenson v. Cardiac & Thoracic Surgery of E. Tenn.*, 388 F.3d 976, 979-80 (6th Cir. 2004) (it was an abuse of discretion to exclude the testimony of a medical expert on the basis of the supposition that an "expert must demonstrate familiarity with accepted medical literature").

20. *See Elcock v. Kmart Corp.*, 233 F.3d 734, 744 n.5 (3d Cir. 2000) (Becker, C.J.) ("[T]he mere fact that [a person] was previously admitted as an expert witness qualified to give testimony on [an issue] is irrelevant to the determination whether he is qualified to give such testimony in this case."); *see also* *Thomas J. Kline, Inc. v. Lorillard, Inc.*, 878 F.2d 791, 799-800 (4th Cir. 1989) ("it would be absurd to conclude that one can become an expert simply by accumulating experience in testifying," and it was "a clear abuse of discretion" for the trial court to admit the testimony).

21. *See JGR, Inc. v. Thomasville Furniture Indus.*, 370 F.3d 519, 524-26 (6th Cir. 2004) (holding that because of his "lack of the requisite first-hand, personal knowledge of the company about which he testified," it was an abuse of discretion and reversible error to allow a CPA, who had not been qualified as an expert, to testify on lost profits) (internal quotations omitted).

FRE 701 and FRE 702 typically preclude industry participants from offering opinions on the key issues addressed by economic experts.²²

Perceptions of industry participants on industry practices and institutions generally are highly relevant, and customer perceptions are apt to be the best evidence on, for example, the substitutability of alternatives for the products of merging firms.²³ But there is a critical difference between perceptions about the substitutability of alternatives for the products of merging firms and an opinion on the scope of the relevant market. The latter opinion must draw on specialized knowledge relating to how much substitutability is necessary to bring alternatives into the relevant market, yet the 2000 amendments to FRE 701 make “clear that any part of a witness’ testimony that is based on scientific, technical, or other specialized knowledge within the scope of Rule 702 is governed by the standards of Rule 702.”²⁴ Only in extraordinary cases could the perceptions of industry participants provide a reasonable basis for an opinion on the likely competitive effects of a proposed merger or restrictive practice without the application of specialized knowledge.

In *Arch Coal*, the court found that customer witnesses testified that “a decrease in the number of suppliers *may* lead to a decrease in the level of competition in the market” but did not testify that the proposed merger *likely would* lessen competition.²⁵ The court then commented: “Customers do not, of course, have the expertise to state what *will* happen” as a result of the merger.²⁶ In this regard, the court correctly interpreted FRE 701 and FRE 702. On the other hand, the court erred to the extent that it based its conclusion that the market was “competitive” on the testimony from customers indicating that they had received “competitive” bids.²⁷ The customers surely meant only that they had received, and benefitted from, multiple bids. To have concluded that the market was performing competitively, the customers would have needed to draw on specialized knowledge in economics, which they never professed that they possessed.

22. *Cf.* *Bank of China v. NBM LLC*, 359 F.3d 171, 180-82 (2d Cir. 2004) (“The admission of [a bank employee’s] testimony pursuant to Rule 701 was error because it was not based entirely on [his] perceptions; the District Court abused its discretion to the extent it admitted the testimony based on [his] experience and specialized knowledge in international banking.”), *cert. dismissed*, 546 U.S. 1026 (2005); *Vernon Walden, Inc. v. LIPOID GmbH*, 2005-2 Trade Cas. (CCH) ¶ 75,072, at 103,727-28 (D.N.J. 2005) (finding a corporate officer of the plaintiff who lacked expertise in either accounting or economics did not have the requisite “expertise to give the industry-wide opinions and economic projections” he was offering).

23. *See* U.S. DEP’T OF JUSTICE & FEDERAL TRADE COMM’N, COMMENTARY ON THE HORIZONTAL MERGER GUIDELINES 9 (2006).

24. Advisory Committee Notes to the 2000 Amendments. The Notes state that FRE 701 was “amended to eliminate the risk that the reliability requirements set forth in FRE 702 will be evaded through the simple expedient of proffering an expert in lay witness clothing.” On the application of FRE 701 prior to the amendments in 2000, see *Asplundh Manufacturing Division v. Benton Harbor Engineering*, 57 F.3d 1190, 1194-1203 (3d Cir. 1995) (Becker, J.).

25. *FTC v. Arch Coal, Inc.*, 329 F. Supp. 2d 109, 146 (D.D.C. 2004).

26. *Id.*

27. *Id.* at 133.

3. Grounding of testimony in economics

As indicated by the Advisory Committee Notes to the 2000 Amendments to FRE 702, an “expert’s testimony must be grounded in an accepted body of learning or experience in the expert’s field, and the expert must explain how the conclusion is so grounded.”²⁸ Testimony with purported basis in economics is admissible only to the extent that its conclusions are shown to have been derived from the application of the tools of economics, i.e., only to the extent that those conclusions are supported by economic reasoning and predicated on economic models or empirical methods used in economics. Models and methods relied upon by an economist need not be state of the art; indeed, the latest developments are necessarily those least tested by time. But models and methods relied on by an economist must not have been generally rejected by the profession in favor of better tools.²⁹ For example, economic testimony relating to competition in oligopoly must be consistent with the game theoretic approach economists have taken for several decades. The game theory revolution led to the rehabilitation of some venerable models long held in disrepute and the rejection of others that had been the received wisdom.³⁰

The testimony of an economist in an antitrust case may be based on the expert’s specialized knowledge of, for example, statistics or the *Horizontal Merger Guidelines*’

28. See also *Daubert v. Merrell Dow Pharms.*, 509 U.S. 579, 592 (1993) (FRE 702 “is premised on the assumption that the expert’s opinion will have a reliable basis in the knowledge and experience of his discipline”); *Zenith Elecs. Corp. v. WH-TV Broad. Corp.*, 395 F.3d 416, 419 (7th Cir. 2005) (“A witness who invokes ‘my expertise’ rather than analytic strategies widely used by specialists is not an expert as Rule 702 defines that term . . . [If a witness] could or would not explain how his conclusions met the Rule’s requirements, he was not entitled to give expert testimony.”); *In re Paoli R.R. Yard PCB Litig.*, 35 F.3d 717, 742 (3d Cir. 1994) (an “expert’s opinion must be based on the ‘methods and procedures of science’ rather than on ‘subjective belief or unsupported speculation’; the expert must have ‘good grounds’ for his or her belief”) (quoting *Daubert*, 509 U.S. at 590); *Craftsmen Limousine, Inc. v. Ford Motor Co.*, 2005-2 Trade Cas. (CCH) ¶ 75,064, at 103,675 (W.D. Mo. 2005) (excluding testimony in part because it was “based only on [the expert’s] speculation that the restraints at issue were ‘anticompetitive’”).

29. Cf. *Bone Shirt v. Hazeltine*, 461 F.3d 1011, 1026 (8th Cir. 2006) (“Science evolves, and scientific methods that were once considered unassailable truths have been discarded over time. Unreliable testimony based upon those outdated theories and methods must be discarded as well, lest scientific stare decisis ensure that such theories survive only in court.”).

30. For over half a century, the Cournot oligopoly model was viewed by economists as positing irrational behavior. See Irving Fisher, *Cournot and Mathematical Economics*, 12 Q.J. ECON. 119, 126-27 (1898). The insights of game theory, however, led economists to realize that view was mistaken. See Robert J. Leonard, *Reading Cournot, Reading Nash: The Creation and Stabilization of the Nash Equilibrium*, 104 ECON. J. 492 (1994). When they thought the Cournot model posited irrational behavior, economists thought rational oligopolists would tend to pursue their collective self interest rather than compete. See Edward H. Chamberlin, *Duopoly: Value Where Sellers Are Few*, 44 Q.J. ECON. 63 (1929). Eventually, economists realized that the pursuit of collective self-interest required an effective means of detecting contrary behavior. See George J. Stigler, *A Theory of Oligopoly*, 72 J. POL. ECON. 44 (1964). And for some time now it has been understood that effective punishment is what prevents contrary behavior. See James W. Friedman, *A Non-cooperative Equilibrium for Supergames*, 38 REV. ECON. STUD. 1 (1971).

hypothetical monopolist test.³¹ An economist also may have specialized knowledge of antitrust law, but an economist's testimony may not cross the fine line between economic analysis and antitrust law.³² This line is particularly important for expert economic testimony on circumstantial evidence of an unlawful collusive agreement. Economics may have much to offer in drawing inferences from circumstantial evidence,³³ but whether an agreement exists is not an economic issue.³⁴ Of course, some admissible testimony from economists is not based on any type of specialized knowledge. For example, expert economic testimony typically includes purely descriptive information.³⁵

As the Supreme Court held in *Joiner*, “nothing requires a district court to admit opinion evidence that is connected to existing data only by the *ipse dixit* of the expert. A court may conclude that there is simply too great an analytical gap between the data and the opinion proffered.”³⁶ Nor can the gap between the data and the opinion be bridged through the mere utterance of economic jargon, such as vague references to econometric methods like “multiple regression” or theoretical constructs like “oligopoly theory.” A witness purporting to rely on econometric methods or economic models must describe them in sufficient detail to communicate the specific methods or models on which the

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31. Cf. *Flanagan v. Altria Group, Inc.*, 423 F. Supp. 2d 697 (E.D. Mich. 2005) (permitting an economist with long tenure at the FTC to offer opinions based on “specialized knowledge about . . . the FTC’s regulation of cigarette advertising and promotion”).
 32. See, e.g., *City of Tuscaloosa v. Harcros Chems.*, 158 F.3d 548, 567 n.27 (11th Cir. 1998) (stating in a § 1 conspiracy case, an economic expert’s “opinions regarding the legal standards applicable to the case are outside his competence as an economist . . . and should be excluded”); *Aventis Envtl. Sci. USA LP v. Scotts Co.*, 383 F. Supp. 2d 488, 516 (S.D.N.Y. 2005) (stating in a § 2 case, an economic expert’s testimony as to the appropriate test for “anticompetitive” conduct “runs counter to the applicable law and usurps [the court’s] role in instructing the jury as to the appropriate legal framework for evaluating the lawfulness of the Defendants’ conduct”).
 33. See generally Gregory J. Werden, *Economic Evidence on the Existence of Collusion: Reconciling Antitrust Law with Oligopoly Theory*, 71 ANTITRUST L.J. 719, 720-34, 759-80 (2004) (reconciling the concept an agreement with modern oligopoly theory).
 34. Rule 704 of the Federal Rules of Evidence bars an admissibility objection to “otherwise admissible” testimony on the grounds that “it embraces an ultimate issue to be decided by the trier of fact.” An expert economist’s testimony on the existence of an agreement is not “otherwise admissible,” however, because it is not grounded in economics. “Rule 704 was not intended to allow experts to offer opinions embodying legal conclusions.” *United States v. Scop*, 846 F.2d 135, 139 (2d Cir. 1988) (holding inadmissible the opinions of a witness that “were legal conclusions” and “went well beyond his province as an expert in securities trading”). For a review of court decisions on the admissibility of economic testimony on the existence of an agreement, see Robert A. Milne & Jack E. Pace III, *Conspiratologists at the Gate: The Scope of Expert Testimony on the Subject of Conspiracy in a Sherman Act Case*, ANTITRUST, Spring 2003, at 36.
 35. See generally Samuel R. Gross & Jennifer L. Mnookin, *Expert Information and Expert Evidence: A Preliminary Taxonomy*, 34 SETON HALL L. REV. 141, 154 (2003) (“Much information from experts is primarily descriptive rather than evaluative.”).
 36. *General Elec. Co. v. Joiner*, 522 U.S. 136, 146 (1997); see also *R.J. Reynolds Tobacco Co. v. Premium Tobacco Stores, Inc.*, 2004-2 Trade Cas. (CCH) ¶ 74,491, at 99,779 (N.D. Ill. 2004) (“If the applicable data and the proffered opinion are separated by an analytical chasm, it cannot be bridged solely by the expert’s say-so”).

witness purports to rely. The witness also must explain why the methods or models are relevant and how they support the conclusion reached.

Precisely what is required of a witness “depends upon the particular circumstances of the particular case.”³⁷ As a general rule, Posner has held that an expert “is not permitted to offer evidence that he has not generated by the methods he would use in his normal academic or professional work, which is to say in work undertaken without reference to or expectation of possible use in litigation.”³⁸ This standard could be understood to preclude economic testimony based on methods especially developed for use in antitrust; however, as Justice Stephen Breyer explained in *Kumho Tire*, what FRE 702 requires is that an expert “employ[] in the courtroom the same level of intellectual rigor that characterizes the practice of an expert in the relevant field.”³⁹ Thus, an empirical method for delineating markets would be permitted, even if unknown in academic circles, if it were well grounded in economic theory and applied sound econometric methods.⁴⁰

As stressed in *Daubert*, “[v]igorous cross-examination, presentation of contrary evidence, and careful instruction on the burden of proof are the traditional and appropriate means of attacking shaky but admissible evidence.”⁴¹ Moreover, a “minor flaw in an expert’s reasoning or a slight modification of an otherwise reliable method will not render an expert’s opinion *per se* inadmissible.” The judge should only exclude the evidence if the flaw is large enough that the expert lacks “good grounds” for his conclusions.⁴² But expert economic testimony lacks good grounds to the extent it relies on models or methods, or ways of applying them, deemed clearly erroneous by

37. *Kumho Tire Co. v. Carmichael*, 526 U.S. 137, 150 (1999); *see also* *Amorgianos v. Nat’l R.R. Passenger Corp.*, 303 F.3d 256, 267 (2d Cir. 2002) (“In deciding whether a step in an expert’s analysis is unreliable, the district court should undertake a rigorous examination of the facts on which the expert relies, the method by which the expert draws an opinion from those facts, and how the expert applies the facts and methods to the case at hand.”).

38. *Khan v. State Oil Co.*, 93 F.3d 1358, 1365 (7th Cir. 1996), *vacated*, 522 U.S. 3 (1997).

39. *Kumho Tire*, 526 U.S. at 152; *see also* *Lantec, Inc. v. Novell, Inc.*, 306 F.3d 1003, 1025 (10th Cir. 2002) (affirming exclusion of an economist’s testimony on market delineation not employing “the same level of intellectual rigor that characterizes an expert in the field of economics and industrial organization”); *United Food Mart v. Motiva Enters., LLC*, 404 F. Supp. 2d 1344 (S.D. Fla. 2005) (excluding relevant market testimony of a witness with a Ph.D. in business administration, in part for failing to follow what an opposing expert asserted were “generally accepted methods in the economics community”).

40. *See Daubert v. Merrell Dow Pharms.*, 509 U.S. 579, 593 (1993). (“[I]n some instances well-grounded but innovative theories will not have been published. Some propositions, moreover, are too particular, too new, or of too limited interest to be published.”) (citation omitted); *Heller v. Shaw Indus.*, 167 F.3d 146, 155 (3d Cir. 1999) (Becker, C.J.) (to hold that an “expert must always cite published studies . . . would effectively resurrect a *Frye*-like bright-line standard, not by requiring that a methodology be ‘generally accepted,’ but by excluding expert testimony not backed by published (and presumably peer-reviewed) studies”).

41. 509 U.S. at 596.

42. *Amorgianos*, 303 F.3d at 267 (quoting *In re Paoli R.R. Yard PCB Litig.*, 35 F.3d 717, 746 (3d Cir. 1994)).

professional consensus.⁴³ For example, an empirical study could appropriately be found inadmissible on the basis of mistakes warned against by standard statistical textbooks.

Although opposing economic experts present different analyses leading to conflicting conclusions, both may have good grounds.⁴⁴ Economics may offer several models or methods that may be useful in analyzing a particular issue in an antitrust case, and “*Daubert* neither requires nor empowers trial courts to determine which of several competing scientific theories has the best provenance. It demands only that the proponent of the evidence show that the expert’s conclusion has been arrived at in a scientifically sound and methodologically reliable fashion.”⁴⁵

Expert economic testimony departing from legal precedent may be inadmissible because it does not “assist the trier of fact to understand the evidence or to determine a fact in issue,” but a departure from legal precedent in no way suggests that testimony lacks good grounds in economics.⁴⁶ Moreover, consistency with precedent is not a basis for finding that expert economic testimony is grounded in economics. Thus, if the sole basis for an economic expert’s opinion on the relevant market was the application of a checklist based on the “practical indicia” set out in *Brown Shoe*,⁴⁷ the testimony would not be admissible.⁴⁸ Of course, testimony by an economic expert is not rendered inadmissible just because it discusses the presence or absence of *Brown Shoe* indicia or addresses issues implicated by the indicia. Moreover, the practical indicia can be interpreted in a manner that invites the application of the tools of economics.⁴⁹

Economic experts sometimes are called upon to draw inferences from statements by industry participants or to interpret documents, and the lens of economics certainly may bring such evidence into sharper focus. But testimony from a witness qualified as an expert in aspects of economics must be excluded if the lens of economics is not

43. See *State Oil*, 93 F.3d at 1365 (Posner, C.J.) (the testimony of a witness who “failed to conduct a study that satisfied professional norms” is inadmissible even if the witness is “a Ph.D. in economics from a reputable university and an experienced consultant in antitrust economics, and hence qualified to offer expert economic evidence”), *vacated*, 522 U.S. 3 (1997). But see *Conwood Co. v. U.S. Tobacco Co.*, 290 F.3d 768, 791-94 (6th Cir. 2000) (admitting a statistical analysis critical to the plaintiff’s damages case despite serious deficiencies and even though a single outlier in the data was responsible for all of the estimated damages). See generally HERBERT HOVENKAMP, *THE ANTITRUST ENTERPRISE* 81-82, 85-89 (2005); David H. Kaye, *The Dynamics of Daubert: Methodology, Conclusions, and Fit in Statistical and Econometric Studies*, 87 VA. L. REV. 1933, 1988-2013 (2001).

44. See, e.g., *ID Sec. Sys. Canada v. Checkpoint Sys.*, 198 F. Supp. 2d 598, 603-09 (E.D. Pa. 2003) (admitting both sides’ expert economic testimony over objections).

45. *United States v. Mitchell*, 365 F.3d 215, 244 (3d Cir. 2004); see also *id.* at 245 (“Experts with diametrically opposed opinions may nonetheless both have good grounds for their views, and a district court may not make winners and losers through its choice of which side’s experts to admit, when all experts are qualified.”).

46. *Contra Bailey v. Allgas, Inc.*, 148 F. Supp. 2d 1222, 1242-45 (N.D. Ala. 2000) (excluding relevant market testimony because it “runs contrary to well-established law”).

47. See *Brown Shoe Co. v. United States*, 370 U.S. 294, 325 (1962).

48. *Contra Nobody in Particular Presents, Inc. v. Clear Channel Commc’ns*, 311 F. Supp. 2d 1048, 1120 (D. Colo. 2004) (overruling objection that relevant market testimony based on the “practical indicia” was not “based on sufficient scientific knowledge or criteria” because such factors previously “had been held relevant”).

49. See *Rothery Storage & Van Co. v. Atlas Van Lines*, 792 F.2d 210, 218 n.4 (D.C. Cir. 1986) (Bork, J.).

employed.⁵⁰ Testimony that documentary evidence itself demonstrates that a conspiracy existed, or that it did not, cannot possibly have good grounds in economics because conspiracy is a legal concept without a direct counterpart in economics.⁵¹ In contrast, there may be good grounds in economics for testimony that certain conduct was, or was not, consistent with the pursuit of unilateral self-interest.

4. The “fit” requirement

FRE 702 requires that expert testimony be “based upon sufficient facts or data,” and expert economic testimony normally must be well grounded in the facts of the industry and the case.⁵² In a notorious case, the trial court excluded most of the testimony of a Nobel Prize-winning economist because he had inadequate knowledge of the industry.⁵³ While no bright-line tests are possible for determining when an expert economist lacks a sufficient command of the facts, there are clear warning signs. One is that the economist has no experience in the particular industry and has devoted little time to the preparation of the testimony offered. Another is that the economist has incorporated few case-specific facts but rather offered “one size fits all” testimony.

The factual foundation required for expert economic testimony, however, necessarily depends on its subject matter. Some propositions of economics are sufficiently universal that their application in a particular case may require little factual foundation. In *In re Brand Name Prescription Drugs*, the court of appeals held that “the district judge erred in excluding [the] testimony *on the grounds that he did*,” because the point of the testimony was something “[e]veryone knows” even without studying that particular industry.⁵⁴ Similarly, little or no factual foundation may be required for economic testimony that merely critiques the analysis of another economic expert, because errors or gaps in economic logic may be clear without any knowledge of the particular facts of a case.

Opposing economic experts in antitrust cases also may legitimately perceive facts differently or take different views of which facts are critical. For purposes of

50. See, e.g., *Aventis Env'tl. Sci. USA LP v. Scotts Co.*, 383 F. Supp. 2d 488, 516 (S.D.N.Y. 2005) (precluding economists in an antitrust case from testifying on the defendant’s “state of mind”); George J. Stigler, *What Does an Economist Know?*, 33 J. LEGAL EDUC. 311, 311 (1983) (economists have “no special skill in reading documents”).

51. See *City of Tuscaloosa v. Harcros Chems.*, 158 F.3d 548, 565, 567 n.27 (11th Cir. 1998) (affirming exclusion of expert statistician’s “characterizations of documentary evidence as reflective of collusion” and opining that expert economist’s “characterization of pieces of documentary evidence as tending to show collusion” also should have been excluded).

52. *Accord Champagne Metals v. Ken-Mac Metals, Inc.*, 458 F.3d 1073, 1078-80 (10th Cir. 2006) (plaintiff’s expert testimony based on facts relating to the market in which plaintiff sold its output was excluded because the claim related to the market in which plaintiff purchased its inputs); *El Aguila Food Prods. v. Gruma Corp.*, 301 F. Supp. 2d 612, 620-24 (S.D. Tex. 2003) (excluding testimony “based on wholly insufficient data” while ignoring “the facts of the case”), *aff’d*, 131 F. App’x 450 (5th Cir. 2005).

53. *In re Brand Name Prescription Drugs Antitrust Litig.*, 1999-1 Trade Cas. (CCH) ¶ 72,446, at 84,126-28 (N.D. Ill. 1999).

54. *In re Brand Name Prescription Drugs Antitrust Litig.*, 186 F.3d 781, 786 (7th Cir. 1999) (Posner, C.J.) (emphasis added).

admissibility, expert economic testimony has a sufficient factual foundation if premised on evidence in the record or any basis “reasonably relied upon by experts in the particular field.”⁵⁵ As noted by the Advisory Committee Notes to the 2000 Amendments to FRE 702:

When facts are in dispute, experts sometimes reach different conclusions based on competing versions of the facts. The emphasis in the amendment on “sufficient facts or data” is not intended to authorize a trial court to exclude an expert’s testimony on the ground that the court believes one version of the facts and not the other.

Economic modeling of the sort that may be relied on by an expert in an antitrust case entails choices made by the expert, and most choices should be justified on the basis that they are consistent with the facts of the case.⁵⁶ Evaluating the fit of an economic model draws on the full array of qualitative and quantitative evidence developed in the case. Courts have excluded economic testimony in antitrust cases premised on models not sufficiently grounded in the facts.⁵⁷

Quantitative evidence is critical in evaluating the fit of a model used to make quantitative predictions. Making an economic model fit the specific quantitative facts of an industry is a process called “calibration.” For example, an oligopoly model used to predict the effects of the merger is calibrated on the basis of premerger market shares and other parameters of the model, such as elasticities of demand. Quantitative testimony based on an economic model is not admissible if the expert fails to calibrate the model properly and the model’s predictions therefore are misleading.

The most significant application of this principle in an antitrust case came in *Concord Boat*, in which the Eighth Circuit excluded expert economic testimony on

55. FED. R. EVID. 703; *see also Champagne Metals*, 458 F.3d at 1080 n.4 (affirming exclusion of testimony of an economic expert as lacking in foundation because it was based “the self-serving statement[s] of an interested party” which the district court had indicated “[n]o reasonable economist would simply accept”).

56. For a few modeling choices, an ample justification can be found in an axiom of economics, e.g., that firms maximize profits (in some sense). For other modeling choices, no justification can be found in either an axiom of economics or consistency with the facts of the case. For example, it may be impossible to know how elasticities of demand change with changes in prices. For this last category of modeling choices, it is best to conduct a sensitivity analysis that makes clear how changes in assumptions would alter the conclusions reached.

57. *See, e.g., Group Health Plan, Inc. v. Philip Morris USA, Inc.*, 344 F.3d 753, 760-61 (8th Cir. 2003) (excluding plaintiffs’ expert testimony because of “excessive speculation,” even though “thorough, sophisticated, and often well-grounded in the relevant scientific literature”); *Am. Booksellers Ass’n v. Barnes & Noble, Inc.*, 135 F. Supp. 2d 1031, 1041 (N.D. Cal. 2001) (excluding a model for purposes of proving damage causation, and summary judgment on damage claims granted, because the model contained “too many assumptions and simplifications that are not supported by real-world evidence”). Commentators have argued that economic testimony is inadmissible if based on game theoretic models developed over the past quarter century. *See Malcolm B. Coate & Jeffrey H. Fischer, Can Post-Chicago Economics Survive Daubert?*, 34 AKRON L. REV. 795 (2001). These commentators note that the predictions of the models are sensitive to their assumptions and they have little empirical verification. These commentators are correct insofar as they argue that testimony should be excluded if it offers no more than a theoretical possibility entirely divorced from the facts of the case.

which a jury verdict had rested.⁵⁸ The court initially noted that *Daubert* requires a “thorough analysis of the expert’s economic model,” which “should not be admitted if it does not apply to the specific facts of the case.”⁵⁹ The court then found that the oligopoly model used by the plaintiffs’ expert economist was “not grounded in the economic reality” of the industry.⁶⁰

Although an economic model used to make predictions must fit the facts of the industry to which it is applied, that does not mean that the model must reflect every institutional detail of an industry. Economic models are meant to be abstractions and are useful because they abstract from real world minutiae. Testimony based on a particular model should not be excluded merely because the stylized actions of economic agents in the model do not comport with the details of actual behavior of industry participants. For example, in *Heary Bros.* the court recounted, but apparently did not accept, an objection to an expert’s model on the grounds that it assumed that competitors compete by setting outputs, while the actual competitors did not literally set outputs.⁶¹ This is the sort of objection courts should overrule. The critical test of a model is whether it explains reasonably well those aspects of past industry performance the model is being used to predict. For example, if a model is being used to predict prices for the years following a proposed merger, it should be able to explain pricing for the years before the merger.⁶²

An empirical model used to make predictions or disentangle effects also must be tailored to the facts of the case. A necessary predicate to the application of an empirical model is a demonstration, based on economic reasoning, of the potential for the data reliably to inform a relevant factual issue. Models used to make predictions or disentangle effects have most often been excluded because they failed to account for important causal factors and therefore failed to isolate the impact of the cause of

58. *Concord Boat v. Brunswick Corp.*, 207 F.3d 1039 (8th Cir. 2000).

59. *Id.* at 1055-56.

60. *Id.* at 1056. Among other deficiencies, the model attributed to the challenged conduct all sales made by the defendant in excess of half of total market sales, even though the defendant made three-quarters of market sales before undertaking the challenged conduct. *Id.* “The model also failed to account for market events that both sides agreed were not related to any anticompetitive conduct.” *Id.* The same model was rejected for similar reasons in *Heary Bros. Lightning Protection Co. v. Lightning Protection Institute*, 287 F. Supp. 2d 1038, 1065-68 (D. Ariz. 2003) (excluding economic testimony because the expert had “no evidence at all supporting [an important] assumption” and the expert’s “model does not fit the economic reality” of the industry). For an argument that the court in *Concord Boat* was wrong to exclude the testimony, see John L. Solow & Daniel Fletcher, *Doing Good Economics in the Courtroom: Thoughts on Daubert and Expert Testimony in Antitrust*, 31 J. CORP. L. 489, 500-01 (2006).

61. 287 F. Supp. 2d at 1067.

62. See generally Gregory J. Werden, Luke M. Froeb & David T. Scheffman, *A Daubert Discipline for Merger Simulation*, ANTITRUST, Summer 2004, at 89. A key test for whether a model satisfactorily explains pricing is whether observed price-cost margins are consistent with the margins predicted by the model. Another possibly useful test is how well a model would have predicted the price effects of entry, new product introductions by incumbents, or other such events that have occurred in the relatively recent past.

interest.⁶³ In addition, any data on which a testifying expert relies must be shown to be reliable and reasonably suited to the task.⁶⁴

In one instructive case, empirically based economic testimony supporting liability was “excluded as irrelevant” because it failed to account for “obvious and significant alternative explanations” for observed price increases.⁶⁵ In a closely related later case, a revised version of the same study by the same expert was excluded on the basis that it was “so incomplete as to be inadmissible as irrelevant.”⁶⁶ The second time around, the plaintiffs and their expert argued that it was infeasible or improper to account for alternative explanations for the price increases, but the court held that the plaintiffs “failed to carry their burden of proving that the incomplete analysis is sufficiently relevant and helpful to justify its admission into evidence in this case.”⁶⁷

The testimony of an economic expert does not apply to the specific facts of the case when it does not relate to an articulated theory of the case.⁶⁸ To illustrate, Posner has

63. See, e.g., *Craftsmen Limousine, Inc. v. Ford Motor Co.*, 363 F.3d 761, 776-77 (8th Cir. 2004) (affirming exclusion of damages testimony because it “did not determine whether other factors, including the emergence of two direct competitors, may have affected” plaintiffs’ growth rate); *Blue Dane Simmental Corp. v. Am. Simmental Ass’n*, 178 F.3d 1035, 1039-41 (8th Cir. 1999) (affirming exclusion of damage estimate because it inferred “causation without considering all independent variables that could affect the conclusion”); *In re Aluminum Phosphide Antitrust Litig.*, 893 F. Supp. 1497, 1504-05 (D. Kan. 1995) (rejecting as unreliable a damage estimate that failed to account for several important factors).

64. See *SMS Sys. Maint. Servs. v. Digital Equip. Corp.*, 188 F.3d 11, 25 (1st Cir. 1999) (“[A]n expert must vouchsafe the reliability of the data on which he relies and explain how the cumulation of that data was consistent with standards of the expert’s profession.”); *Mercedes-Benz U.S.A. LLC v. Coast Automotive Group*, 2006-2 Trade Cas. (CCH) ¶ 75,451, at 106,156-59 (D.N.J. 2006) (excluding proffered testimony of two experts (at least one an economist) on the basis that it lacked “reliability and fit” because it “relied entirely” on unverified statements by the owner of the sponsoring party); *Vernon Walden, Inc. v. LIPOID GmbH*, 2005-2 Trade Cas. (CCH) ¶ 75,072, at 103,727 (D.N.J. 2005) (excluding damages testimony because it was based on unverified estimates of important quantities obtained from a person who lacked expertise in accounting or economics and was a corporate officer of the party sponsoring the expert); *U.S. Info. Sys. v. Int’l Bd. of Elec. Workers Local Union No. 3*, 313 F. Supp. 2d 213, 233-35 (S.D.N.Y. 2004) (“As the proponents of the expert, it is the plaintiffs’ burden to demonstrate the reliability of his data. Here, the plaintiffs have not met that burden, and [the expert’s] data sample therefore cannot provide the basis for his testimony.”), *on reconsideration*, No. 00 Civ. 4763, 2004 WL 2029398, at *3 (S.D.N.Y. 2004) (finding the testimony admissible after the expert submitted a revised report); see also Andrew I. Gavil, *Defining Reliable Forensic Economics in the Post-Daubert/Kumho Tire Era: Case Studies from Antitrust*, 57 WASH. & LEE L. REV. 831 (2000).

65. *In re Wireless Tel. Servs. Antitrust Litig.*, 385 F. Supp. 2d 403, 427-28 (S.D.N.Y. 2005).

66. *Freeland v. AT&T Corp.*, 238 F.R.D. 130, 143-49 (S.D.N.Y. 2006).

67. *Id.* at 149.

68. Cf. *Group Health Plan, Inc. v. Philip Morris USA, Inc.*, 344 F.3d 753, 761 (8th Cir. 2003) (“the disconnect between [the plaintiff’s expert’s] work and the [plaintiff’s] theory of liability weighs heavily against the admission of his testimony under *Daubert* because it undermines the existence of a ‘legal nexus between the injury and the defendants’ wrongful conduct’ and thus does not properly ‘fit’”); *Craftsmen Limousine, Inc. v. Ford Motor Co.*, 2005-2 Trade Cas. (CCH) ¶ 75,064, at 103,675-76 (W.D. Mo. 2005) (excluding liability testimony for several reasons, including that its “relevant market definition contradicts” that asserted by the party sponsoring the expert). But see *Solow & Fletcher*, *supra* note 60, at 499 (suggesting that requiring an expert’s testimony to fit a litigant’s theory creates “incentives for experts to act as hired guns”).

stressed the importance of market structure in conspiracy cases based on circumstantial evidence,⁶⁹ and opposing experts often testify in such cases on whether industry conditions are conducive to collusion. But the significance of structural conditions depends on how a conspiracy allegedly was organized.⁷⁰ A high degree of product heterogeneity may be a significant factor if the conspiracy allegedly entailed an agreement on prices, but have no significance if the conspiracy allegedly entailed an agreement to allocate customers. Similarly, the inability to observe rivals' prices may make it difficult to detect cheating on an agreed price, yet it may be easy to detect cheating on a customer allocation, if it is possible to observe each customer's supplier. Economic testimony that conditions are favorable to collusion should not be admitted unless the witness bases any opinions on one or more specified theories of collusion. And if the plaintiff or plaintiff's economic expert specifies one or more theories of collusion, economic testimony by a defense expert on the conduciveness of structural conditions to collusion should be excluded unless any opinions are based on the collusion theories specified by the plaintiff.

5. The *Daubert* reliability criteria

Daubert listed specific criteria for “determining whether a theory or technique is scientific knowledge that will assist the trier of fact.”⁷¹ They were “whether a theory or technique . . . can be (and has been) tested,” whether it “has been subjected to peer review and publication,” its “known or potential rate of error” and the “existence and maintenance of standards controlling the technique’s operation,” and whether it has gained “[w]idespread acceptance.”⁷² *Kumho Tire* underscored the fact that *Daubert* had indicated that these criteria “do not constitute a ‘definitive checklist or test’”⁷³ and agreed with “the Solicitor General that ‘[t]he factors identified in *Daubert* may or may not be pertinent in assessing reliability, depending on the nature of the issue, the expert’s particular expertise, and the subject of his testimony.’”⁷⁴

69. *In re High Fructose Corn Syrup Antitrust Litig.*, 295 F.3d 651, 654-58 (7th Cir. 2002).

70. On the application of *Daubert* to economic testimony on the existence of a conspiracy, see *Werden*, *supra* note 33, at 787-94. Particular cases also have spawned a lively debate among the opposing experts. See Roger D. Blair, *Lessons from City of Tuscaloosa*, ANTITRUST, Summer 1996, at 43; Roger D. Blair & Jill Boylston Herndon, *Ambiguous is Still Ambiguous*, ANTITRUST, Spring 2003, at 48; Roger D. Blair & Jill Boylston Herndon, *Inferring Collusion from Economic Evidence*, ANTITRUST, Summer 2001, at 17; Roger D. Blair & Jill Boylston Herndon, *The Implications of Daubert for Economic Evidence in Antitrust Cases*, 57 WASH. & LEE L. REV. 801 (2000); Robert F. Lanzillotti, *Coming to Terms with Daubert in Sherman Act Complaints: A Suggested Economic Approach*, 77 NEB. L. REV. 83 (1998); Robert F. Lanzillotti & James T. McClave, *Comment: Meeting the “Ambiguity” Test under Daubert*, ANTITRUST, Spring 2003, at 44.

71. *Daubert v. Merrell Dow Pharms.*, 509 U.S. 579, 593-94 (1993).

72. *Id.*

73. *Kumho Tire Co. v. Carmichael*, 526 U.S. 137, 150 (1999) (quoting *Daubert*, 509 U.S. at 593); see also *id.* at 141-42.

74. *Id.* at 150; see also *United States v. Brown*, 415 F.3d 1257, 1267 (11th Cir. 2005) (affirming the admission of “expert opinion evidence that does not meet three of the four *Daubert* factors”).

When economic testimony relies on an empirical regularity about the behavior of competitors, the “known or potential rate of error” criterion may be useful. Although Posner held that “the existence of an agreement can be inferred” from “economic evidence,” including evidence on “the structure of market,”⁷⁵ there is a known high rate of error in predicting the existence of *lawful* export cartels on the basis of market structure.⁷⁶ When a plaintiff’s economic expert testifies that an industry’s structural conditions make *unlawful* collusion likely, the rate of error is apt to be even greater.⁷⁷ The rate of error also is substantial when a defendant’s economic expert testifies that structural conditions make collusion unlikely. Economic literature has found a significant incidence of criminally prosecuted antitrust conspiracies in industries with structural conditions considered unfavorable to collusion.⁷⁸

Most often, the *Daubert* criteria are not useful in assessing the reliability of economic testimony in antitrust cases because the reliability issue is whether a generally accepted economic model or method was appropriate for a particular task and was applied properly.⁷⁹ Unlike many of the other disciplines sometimes called upon by expert testimony, economics typically has no well-established standards governing the selection and application of particular models and methods.

6. Procedures for applying FRE 702

The proponent of expert testimony has the burden of establishing its admissibility.⁸⁰ Hence, the testimony of a witness being qualified as an expert in aspects of economics must make out a *prima facie* case for its admissibility by setting out both good grounds in economics for the opinions offered and the qualifications of the witness to offer the opinions. Expert economic testimony must identify the specific models and methods of economics supporting each opinion expressed, the training and experience that qualifies

75. *In re High Fructose Corn Syrup Antitrust Litig.*, 295 F.3d 651, 654-55 (7th Cir. 2002).

76. See Andrew R. Dick, *If Cartels Were Legal, When Would Firms Fix Prices?*, in *HOW CARTELS ENDURE AND HOW THEY FAIL* 144 (Peter Z. Grossman ed., 2004); Andrew R. Dick, *Identifying Contracts, Combinations and Conspiracies in Restraint of Trade*, 17 *MANAGERIAL & DECISION ECON.* 203 (1996).

77. A court also might exclude the testimony under Rule 403 of the Federal Rules of Evidence on the ground that the testimony’s “probative value is substantially outweighed by the danger of unfair prejudice, confusion of the issues, or misleading the jury.”

78. See Peter Asch & Joseph J. Seneca, *Characteristics of Collusive Firms*, 23 *J. INDUS. ECON.* 223 (1975); Arthur G. Fraas & Douglas F. Greer, *Market Structure and Price Collusion: An Empirical Analysis*, 26 *J. INDUS. ECON.* 21 (1977); George A. Hay & Daniel Kelly, *An Empirical Survey of Price Fixing Conspiracies*, 17 *J.L. & ECON.* 13 (1974); Margaret C. Levenstein & Valerie Y. Suslow, *Studies of Cartel Stability: A Comparison of Methodological Approaches*, in *HOW CARTELS ENDURE AND HOW THEY FAIL* 9 (Peter Z. Grossman ed., 2004).

79. *Accord Seatrax, Inc. v. Sonbeck Int’l*, 200 F.3d 358, 372 (5th Cir. 2000) (“But whether *Daubert*’s suggested indicia of reliability apply to any given testimony depends on the nature of the issue at hand, the witness’s particular expertise, and the subject of the testimony.”); *Bailey v. Allgas, Inc.*, 148 F. Supp. 2d 1222, 1235 (N.D. Ala. 2000) (holding that the *Daubert* criteria did not apply to relevant market testimony by an economist), *aff’d*, 284 F.3d 1237, 1251 (11th Cir. 2002).

80. See, e.g., *Lauzon v. Senco Prods.*, 270 F.3d 681, 686 (8th Cir. 2001); *Nelson v. Tenn. Gas Pipeline Co.*, 243 F.3d 244, 251 (6th Cir. 2001); *Oddi v. Ford Motor Co.*, 234 F.3d 136, 144 (3d Cir. 2000); *Lust v. Merrell Dow Pharms.*, 89 F.3d 594, 598 (9th Cir. 1996).

the witness to apply those models and methods, the rationale for selecting those models and methods, and the economic logic that leads to the ultimate conclusions reached.⁸¹

Rule 26(a)(2)(B) of the Federal Rules of Civil Procedure requires that expert testimony be disclosed in advance of trial through a “written report prepared and signed by the witness,” which must “contain a complete statement of all opinions to be expressed and the basis and reasons therefore” as well as “the qualifications of the witness.” Consequently, an expert’s report must itself make out a *prima facie* case for the admissibility of the expert’s testimony. Compliance with Federal Rule of Civil Procedure 26(a)(2)(B) should provide the opposing party with a sufficient basis for formulating any objection it may have to the admissibility of the testimony under FRE 702. Thus, motions to exclude expert economic testimony in antitrust cases normally are decided prior to trial, e.g., in conjunction with summary judgment rulings.⁸² Resolving issues on the admissibility of expert economic testimony prior to trial is likely to conserve judicial resources as well as facilitate trial preparation.

Pretrial proceedings on the application of FRE 702 could cause courts to expend excessive resources,⁸³ but courts can limit the resource expenditure. The Supreme Court has made clear that district courts have considerable “latitude in deciding *how* to test an expert’s reliability, and to decide whether or when special briefing or other proceedings are needed to investigate reliability.”⁸⁴ One court of appeals explained that “[a] district court’s *Daubert* inquiry need not take any specific form . . . so long as the court has an adequate record on which to base its ruling.”⁸⁵ Another observed that “courts have displayed considerable ingenuity in devising ways in which an adequate record can be developed so as to permit *Daubert* rulings to be made in conjunction with motions for

81. Cf. *J.B.D.L. Corp. v. Wyeth-Ayerst Labs.*, 2005 WL 1396940, at *20-21 (S.D. Ohio 2005) (rejecting as “fatally flawed” an inference in the testimony of two economists, which they justified solely on the basis of “basic economic theory,” when evidence indicated the industry in question was unique and empirical research had indicated that the inference was not valid in that industry).

82. See, e.g., *Craftsmen Limousine, Inc. v. Ford Motor Co.*, 2005-2 Trade Cas. (CCH) ¶ 75,064, at 103,675-76 (W.D. Mo. 2005) (granting summary judgment on an antitrust claim after excluding expert economic testimony), *aff’d*, 491 F.3d 380 (8th Cir. 2007); *El Aguila Food Prods. v. Gruma Corp.*, 301 F. Supp. 2d 612 (S.D. Tex. 2003), *aff’d*, 131 F. App’x 450 (5th Cir. 2005); *Heary Bros. Lightning Protection Co. v. Lightning Protection Inst.*, 287 F. Supp. 2d 1038, 1047-68 (D. Ariz. 2003); see also *Miller v. Baker Implement Co.*, 439 F.3d 407 (8th Cir. 2006) (affirming summary judgment and exclusion of expert testimony); *Cortés-Irizarry v. Corporación Insular de Seguros*, 111 F.3d 184, 188 (1st Cir. 1997) (“If proffered expert testimony fails to cross *Daubert*’s threshold for admissibility, a district court may exclude that evidence from consideration when passing upon a motion for summary judgment.”).

83. In one case, the district court conducted a four-day hearing before concluding that a proffered expert did “not have the requisite knowledge to be qualified as an expert in antitrust litigation, as he lacks a clear understanding of basic economic principles.” *Va. Vermiculite Ltd. v. W.R. Grace & Co.*—Conn., 98 F. Supp. 2d 729, 734 (W.D. Va. 2000).

84. *Kumho Tire Co. v. Carmichael*, 526 U.S. 137, 152 (1999). Appeals courts have upheld the exclusion of expert testimony without conducting a hearing. See *United States v. Evans*, 272 F.3d 1069, 1094 (8th Cir. 2001) (“There is no requirement that the District Court always hold a *Daubert* hearing prior to qualifying an expert witness . . .”); *Kirstein v. Parks Corp.*, 159 F.3d 1065, 1067 (7th Cir. 1998) (“[T]he district court had a sufficient basis for her decision without holding a hearing.”).

85. *Baker Implement*, 439 F.3d at 413.

summary judgment.”⁸⁶ Without a hearing, the record would include the expert reports, the motion to exclude, the opposition, and most likely, expert declarations addressing the issues raised by the motion.

It has been suggested that the courts are not up to the task imposed on them by the application of FRE 702, which is to “resolve disputes among respected, well-credentialed scientists about matters squarely within their expertise, in areas where there is no scientific consensus.”⁸⁷ But it is not FRE 702 that compels courts to resolve disputes among experts; indeed, the application of FRE 702 may avoid the need to resolve some disputes. Moreover, the deficiencies that have led courts to exclude expert economic testimony generally were identifiable without any expertise in economics. When special expertise in economics is required, it can be supplied through the use of a court-appointed expert or technical advisor. A court-appointed expert could offer an opinion on whether proffered testimony was good economics,⁸⁸ and a technical advisor could provide general background information on the models and methods of economics.⁸⁹

7. Conclusion

Daubert and its progeny are improving the quality and clarity of economic testimony in antitrust cases, and they are thereby increasing the sophistication of the discourse in antitrust litigation and the accuracy of judge and jury decisions. The benefits of *Daubert* and its progeny are enhanced by a strict application of FRE 702. By requiring that witnesses be qualified to give the specific opinions offered, FRE 702 screens out totally incompetent testimony, as well as testimony from able economists who nevertheless lack critical training and experience on the specific issues they address or methods they apply. By requiring that an economic expert demonstrate that testimony is grounded in economics, FRE 702 both screens out the ipse dixit of the expert and also clarifies the economic logic and formal analysis supporting opinions that go well beyond ipse dixit. And by requiring that expert testimony fit the facts of the case, FRE 702 compels that economic analysis be firmly grounded in real world industry characteristics and hard data.

86. *Cortés-Irizarry*, 111 F.3d at 188 n.3.

87. *Daubert v. Merrell Dow Pharms.*, 43 F.3d 1311, 1316 (9th Cir. 1995).

88. *See generally* *Miller v. Pfizer, Inc.*, 356 F.3d 1326 (10th Cir. 2004) (relying on court-appointed experts in determining that expert testimony in a products liability case was inadmissible). Rule 706 of the Federal Rules of Evidence authorizes the appointment of an expert on the court’s own motion.

89. *See generally* *FTC v. Enforma Natural Prods.*, 362 F.3d 1204, 1212-15 (9th Cir. 2004); *TechSearch, L.L.C. v. Intel Corp.*, 286 F.3d 1360, 1378-80 (Fed. Cir. 2002); *Ass’n of Mexican-Am. Educators v. California*, 231 F.3d 572, 590-91 (9th Cir. 2000) (en banc); *id.* at 609-14 (Tashma, J., dissenting); Note, *Improving Judicial Gatekeeping: Technical Advisors and Scientific Evidence*, 110 HARV. L. REV. 941 (1997).